

ABSTRACT

A substance-atomizing apparatus (30) comprises a pump member (9) and a generator member (12). The pump member (9) has a piston (13) that is reciprocally moved in a cylinder (17) by drive device (1) and pressurizes a raw material fluid. The generator member (12) makes the raw material fluid pressurized in the pump member (9) pass through a hole portion (26) provided inside the generator member, and atomizes a substance included in the raw material fluid in accordance with nozzle characteristics of the hole portion (26). A pressure chamber (14) is formed between the piston (13) and a closed end of the cylinder (17). An intake (15) is formed on a cylinder (17) side surface of the pressure chamber (14). An outlet (16) is formed on the closed end (18) of the cylinder (17). In the first half of a discharge stroke, the raw material fluid is sent from the pressure chamber (14) into a charge vessel (10) through the intake (15). In the last half of the discharge stroke, the intake (15) is directly closed by the side surface of the piston (13), and the raw material fluid is sent from the pressure chamber (14) into the generator member (12) through the outlet (16).